that relates to the external device received from the display apparatus **100**, and transmit the communication protocol information to the display apparatus **100**, and accordingly, the processor **130**, based on the information that relates to communication protocols received from the server, may select communication protocols required for communicating with the external device and then perform communication with the external device.

[0103] FIG. **7** is a block diagram illustrating a configuration of another display apparatus, according to an exemplary embodiment.

[0104] Referring to FIG. **7**, the display apparatus **100** may include the first input port **110**, the second input port **120**, the processor **130**, the storage **140**, and the communicator **150**.

[0105] In particular, the storage **140** may store information that relates to a plurality of communication protocols, and the communicator **150** may communicate with a server, and the processor **130** may update information that relates to a plurality of communication protocols by storing additional information that relates to the communication protocol received from a server in the storage **140**.

[0106] For example, if it is assumed that the processor **130** cannot select a communication protocol from among a plurality of communication protocols A, B, C, and D stored in the storage **140** based on the received information that relates to the external device, the processor **130** may search for communication protocol E which is required for communicating with the external device based on the information that relates to the external device, and transmit information that relates to the protocol E to the display apparatus **100**. Accordingly, the processor **130** may store additional information that relates to the communication protocol E which had previously not been stored in the storage **140** in the storage **140**, and update information that relates to a plurality of communication protocols.

[0107] Accordingly, when the external device using the communication protocol E is connected with the display apparatus **100**, the processor **130** may select the communication protocol E based on the information that relates to a plurality of protocols stored in the storage **140** without transmitting information that relates to the external device to a server.

[0108] Further, it can be assumed that information that relates to the external device may be received by using any of various methods other than the case of receiving information that relates to the external device via the first input port **110**, that is, the port that is configured in accordance with an HDMI specification.

[0109] FIG. **8** is a block diagram illustrating a configuration of a display apparatus, according to still another exemplary embodiment.

[0110] Referring to FIG. **8**, the display apparatus **100** may include the first input port **110**, the second input port **120**, the processor **130**, and a photographer **160**, and here, the first input port **110**, the second input port **120**, and the processor **130** have been described above and further description will be omitted.

[0111] The photographer **160** may obtain an image that relates to an object, read a barcode, and/or recognize an image of a preset pattern.

[0112] In particular, the processor **130**, via the photographer **160**, may read a QR (Quick Response) code attached to the external device, and obtain information that relates to the external device based on the read QR code.

[0113] For example, the QR code attached to the external device may include a manufacturer of the external device, a name of the external device, and information that relates to a product group of the external device, and accordingly, the processor **130** may receive the information that relates to a manufacturer, a name of a device, and a product group by reading the QR code of the external device recognized via the photographer **160**. In addition, based on the obtained information that relates to a manufacturer of the external device, a name of a device, and a product group, a communication protocol that corresponds to the second input port **120** can be automatically selected.

[0114] In addition, the photographer **160** may recognize information that relates to an image of a type of the external device or a serial number corresponding to the external device, and the processor **130**, by comparing an image that relates to a type of the external device recognized via the photographer **160** with a prestored image of the various external devices, may identify the external device and select information that relates to the external device, and obtain information that relates to the external device based on the serial number recognized via the photographer **160**.

[0115] In addition, the display apparatus **100**, via short distance wireless communication such as NFC (Near Field Communication) or RFID (radio frequency identification), may receive information that relates to the external device, and the processor **130** may select a communication protocol based on information that relates to the external device which is received via short distance communication such as NFC or RFID.

[0116] FIG. **9** is a view to illustrate a method of receiving information that relates to an external device, according to an exemplary embodiment.

[0117] Referring to FIG. **9**, a display apparatus **910** includes a photographer **920**, and here, the photographer **920** may be realized as a camera lens. Of course, not only the camera lens, but also an infrared transceiver and/or an optical communicator can be implemented as the photographer **920**.

[0118] In addition, the display apparatus **910** and the external device **930** may be connected via the first input ports **911** and **931** which are configured in accordance with the HDMI specification, and may be connected via the second input ports **912**, **932** which are configured in accordance with the UART communication method.

[0119] In addition, the QR code **940** attached to the external device **930** is recognized via the photographer **920** of the display apparatus **910**, and the processor **130** of the display apparatus **910** may detect information that relates to a manufacturer, a name of a device, and a product group of the external device **930** from the QR code **940** recognized via the photographer **920**.

[0120] In addition, the processor **130** may select a communication protocol required for communicating with the external device **930** based on information that relates to a manufacturer, a name of a device, and product group of the external device **930**, and control to communicate with the external device **930** via the second input port **912** by using the selected communication protocol.

[0121] In this aspect, in the above-described examples, the processor **130** may receive, from the external device, information that relates to an image and a sound via the first input port **110**, and receive a control command to control the